Arizona Department of Water Resources
GROUNDWATER USERS ADVISORY COUNCIL
Tucson Active Management Area
Kenneth Seasholes, Area Director

DEE T. O'NEILL
Chair

DAVID MODEER
Vice-Chair

JOHN MAWHINNEY

JON POST

CHUCK SWEET

Minutes
January 31, 2005

Members Present:
Dee O'Neill, Chair
John Mawhinney
Jon Post
Chuck Sweet

Staff Present:
Kenneth Seasholes, Area Director
Mary Bauer
Christina Bickelmann
John Bodenchuk
Laura Grignano
Diane Kusel
Jeff Tannler
Virginia Welford

Others:
Beryl Baker, Concerned Citizen
Tom Berry, Pima Count Wastewater Mgmt.
Kurt Blust, Haley & Aldrich
Janet Lea Carr, SAWUA
Dave Crockett, FWID
Toops Culbertson, Farmers Water Co./FICO
Brad DeSpain, Marana Water Dept.
Justin Ferris, WRRC
Alan Forrest, Oro Valley Water Co.
Allison Getty, USDA – NRSC
Robert Glennon, UA – Law
Rae Gomez-Pond, USDA – NRSC
Donald J. Gross, ADWR – Colorado River Mgmt.
Eve Halper, USBR
Eric Holler, USBR
Herb Kai, Kai Farms
Meron Kidane, Castro Engineering
Tina Lee, Ward 2 Council Office
Ries Lindley, Tucson Water
Val Little, Water CASA
Ralph Mara, Tucson Water
Michael McCasland, Tucson Water
Elaine Nathanson, PR Consultant
Bill Richardson, Pima County Wastewater Mgmt.
Dennis Rule, Tucson Water
Kristen Zimmerman, PAG

1. Call to Order

Chairperson Dee O'Neill called the meeting to order at 9:00 a.m. Introductions were made.

2. Approval of Minutes

John Post made a motion to approve the minutes of December 7, 2004. Chuck Sweet seconded the motion. The minutes were unanimously approved.

3. Use of CAP Water in the Municipal Sector

Ken Seasholes briefed the group on the importance of CAP water use in the community. He distributed background information on CAP deliveries by category through 2004 and CAP subcontract sizes.

Tucson Water and the northwest providers were invited to give presentations on their future plans for use of CAP water.

Dennis Rule, Tucson Water, explained that their presentation covers only a portion of their 50-year water plan. The plan incorporates all of the City's water resources and deals with a number of community decisions that need to be made on water quality and how the water resources will be used in the future.

Mr. Rule reviewed a map depicting the area the City of Tucson is looking at for future expansion along with the current service area. In particular, the southeast area is the primary focus for future planning.

He then reviewed a general schematic of where the potable water supplies are currently coming from, which consist of the Central, Santa Cruz, South Avra Valley, Southside wellfields, as well as the Central Avra Valley Storage and Recovery Project (CAVSARP) recovery wellfield. CAVSARP is Tucson Water's primary facility for use of CAP water.

Mr. Rule turned the presentation over to Ralph Marra, chief hydrologist for Tucson Water. Mr. Marra reported on Tucson Water's primary areas of recharge. The existing facilities are CAVSARP and Pima Mine Road. Southern Avra Valley Storage and Recovery Project (SAVSARP) is a proposed facility. CAVSARP has 27 recovery wells in place and is designed to recharge and recover 60,000 acre-feet/year. An application was recently submitted to the Arizona Department of Water Resources (ADWR) to expand the permitting capacity an additional 20,000 acre-feet/year. Tucson Water is interested in "wet water" recovery, in order to obtain a hydrologically sustainable future. CAVSRP's additional capacity is intended to provide an opportunity for the Arizona Water Banking Authority (AWBA) to store water where the recovery capability is already in place.

SAVSARP is currently under development. Much of the recharge feasibility work has been done on site, and it looks very promising. The first phase of the facility will be designed to take 50,000 acre-feet/year, with the completed project designed to receive 100,000 acre-feet/year to provide flexibility for expansion to meet future demand. Upon completion of the first phase, Tucson Water plans to fully utilize its 135,000 acre-feet of

CAP allocation,via annual recharge and recovery, by 2012. It also plans to build a secondary pipeline in order to bring the recovered water into the their service area.

Depending on what the community decides it is willing to pay for an acceptable mineral content level (TDS), Tucson Water is prepared to use the Hayden-Udall Treatment Plant for enhanced treatment to obtain the desired water quality.

Tucson Water is looking to maintain operational flexibility and believes the best way to prepare for uncertainty is to create the greatest number of wet water delivery opportunities. In order to maximize wet water benefits, Tucson Water plans to invest in additional infrastructure to provide sustainability to the community.

There are a number of ways the city can fully utilize its CAP allocation. Mr. Marra recommended the audience review and provide feedback on the 50-year water plan, which outlines the decision points and choices the community must face over time.

At this point Mr. Marra opened the floor for questions. Mr. Sweet asked about the special election on water revenue bonds that is on the ballot this year. Mr. Marra confirmed that there is a water bond election but clarified that this year is also a comment period on the 50-year water plan. Tucson Water is soliciting input from various stakeholders, primarily its customers, on proposals to deal with the water challenges that lie ahead.

Mr. Mawhinney asked if there is any danger in recharging too much in one particular area relative to its recovery. Mr. Marra stated the biggest consideration is having the water mound go above land surface, but the depth-to-water at their recharge facilities is over 250 feet; therefore, plenty of storage is available. Migration is not an issue because the recovery wellfields are designed to capture the water and bring it back into the system.

Mr. Mawhinney referred to a study put out by the Western Resource Advocates on unaccounted for water (UFW). The study congratulated the City of Tucson for its low gallons per capita per day and many other successful programs, but it also suggested that the city was one of the worst in the southwest for UFW. The study reported Tucson at 12% UFW and Mesa at 1.3%. Dennis Rule responded that it's difficult to think that the disparity between Tucson and Mesa is associated with the systems, although Mesa's service area is much more concentrated. Tucson Water is looking at whether this is an administrative issue. Mr. Marra added when it comes to the administrative side of UFW, some places find ways to account for UFW and actually take it out of the calculation. He did recognize that UFW is an issue and has increased over the past few years. This issue is a priority that Tucson Water will address, which will include replacing old meters.

Warren Tenney said to deal with its UFW, Metro Water District began a meter replacement program around four years ago and has reduced UFW to approximately 7%.

Alan Forrest reported Oro Valley's UFW has been between 4-7%. He noted that when there's construction going on, the UFW goes up. This is probably due to the contractors pulling off hydrants; locks have since installed. The better a utility keeps track, the likelihood UFW will go down.

Warren Tenney, Metro Water District and Eric Holler, US Bureau of Reclamation (USBR) gave the second part of the presentation. Mr. Tenney reported that each of the northwest water providers (Flowing Wells Irrigation District, Oro Valley, Town of Marana and Metro Water) have an allocation of CAP water, totaling 20,007 acre-feet/year. There are also proposed reallocations for Metro Water and Oro Valley, totaling 7,959 acre-feet/year. In 2004 65% of CAP water was utilized, with Metro Water recharging as much as it pumped. Additionally, each provider is paying holding costs to secure the water.

There have been efforts underway by the providers to individually use CAP water and there are concerns regarding utilizing wet water. Since the 1990s the northwest providers have been working cooperatively on ways to utilize CAP water. The Avra Valley and Lower Santa Cruz Recharge Projects were built as a part of this collaborative effort.

The providers have worked with the USBR and the CAP to initiate the Southern Arizona Regional Water Management Study (SWARMS), which was conducted to look at alternatives to using CAP water. As part of the study different deliveries alternatives were considered: treatment and direct delivery, recharge and recovery, Tucson Water's delivery system and continued well usage. Primary treatment methods were also studied: conventional treatment (CT), slowsand filtration (SSF), microfiltration/ultrafiltration (MF/UF). Using these treatment methods in conjunction with reverse osmosis (RO) were also considered to address total dissolved solids (TDS). In addition to addressing TDS, the different filtration applications remove varying amounts of other constituents.

Eric Holler explained that SSF could be used to effectively treat water to drinking water standards and works well as an effective pretreatment to reverse osmosis. The cost for SSF makes it a viable treatment alternative. 0.15/1,000 gallons is approximately ¼ the cost of either MF/UF or CT. SSF is used in England, Germany, and parts of the United States. Locally, it is not favored, with claims that SSF is not robust enough to treat Colorado River water, although the study found that this is not the case. Also claimed is that it takes up too much land and is high maintenance. Land costs and maintenance are included in the 0.15/1,000 gallons. SSF is akin to recharge with sand being used on the surface. As a result of the SWARMS, SSF has been recommended as a cost-effective, viable option for treatment and direct delivery of CAP water.

Mr. Tenney continued by reporting that based on the studies, the northwest providers are looking at pursuing treatment and direct delivery of CAP water. The costs for SSF treatment, a distribution system and a reliability reservoir are estimated at $97 million. When the RO treatment is added the costs increase substantially, roughly $182 million, primarily due to brine (salt) disposal. The northwest water providers will be conducting a pilot study to look at different levels of RO treatment to determine the most viable option.

Mr. Mawhinney asked how much water is lost with RO treatment. Mr. Holler responded that a 15% loss would occur with the potential of getting down to 10%, which equates to roughly every 10 gallons used 1 ½ gallons would be lost.

Mr. Tenney concluded by stating that the northwest providers have taken action to utilize CAP water by pursuing optimal use of CAP allocations to ensure wet water for its costumers. In December 2004, all the governing bodies passed resolutions reconfirming

their commitment to treatment and direct delivery of CAP water and to ensure a reliability reservoir.

Kenneth Seasholes asked the providers what type of support they might need from the community and the GUAC to help move plans forward in terms of using renewable supplies. Dennis Rule responded by asking the public and GUAC to provide input on Tucson Water's 50-year plan. Warren Tenney stated it is important as a region to support each providers'efforts when utilizing CAP water.

Mr. Seasholes continued by stating that costs are a major component of all the plans taking place and referred to a report that was completed by the Upper Santa Cruz Water Users Group. The report looks at what would be involved in extending the CAP from Pima Mine Road further south to the Green Valley-Sahuarita areas. With a number of water quality issues in those areas and the era of relatively inexpensive groundwater costs coming to an end, this may be an opportunity to create a dialogue with Green Valley-Sahuarita providers to look at ways to utilize more CAP water as a supply.

4. Institutional and Policy Advisory Group (IPAG) Update

Ken Seasholes provided an update on the IPAG activities. The IPAG met recently and revisited interstate storage. Last year, the AWBA was able to store 5,400 acre-feet of water for Nevada in the Tucson AMA at the Lower Santa Cruz, Pima Mine Road and Avra Valley facilities. This prompted the dialogue, once again, on how decisions and recommendations about recharge should relate to recovery options. Since there is now interstate storage, the recovery of that water will happen earlier than the water used for firming.

Discussion ensued on how detailed IPAG would like to get in actual recovery planning. A list was produced on what would be included in a CAP recovery plan, which will be applied to the four areas where storage has already taken place. IPAG will look at what is already known about the facilities in terms of getting the water out and then will move forward with an actual planning process. Another meeting is scheduled where discussions will continue on this scope of work.

Mr. Mawhinney suggested talking about the primary argument that needs to be resolved. Mr. Seasholes reported that the major issue is how to retrieve recovery in the Marana area where there has been a large amount of CAP storage. (There are also non-CAP recovery issues as well). It has been expressed by the city and others providers that if storage is to continue in the Marana area, particularly for interstate, that a plan be in place to deal with the legal/landowner constraints associated with CMID.

5. Area Director's Report

Kenneth Seasholes distributed copies of the formal recommendations that were made to the Governor at the Water Listening Session. He stated that it was an extremely effective forum, with more than 30 speakers and many hand-written comments.

ADWR's chief budget officer has been negotiating and discussing the department's budget with the Governor's office. Initially there was a flat budget for the department,

but it is believed the Water Listening Sessions help persuade the Governor's office in terms of recommending an increase in budget.

Mr. Seasholes continued by reporting there are a number of water bills that have been introduced to the legislature this year. Summaries of the bills are available from the Arizona Water Municipals Users Association at www.amwua.org.

Jeff Tannler gave an update on the well rules process. The stakeholders have been conducting regular discussions to become more educated on the issues. The latest meeting was devoted to subsidence. The future issues to be discussed are riparian areas and surface water issues. The next meeting will be held on February 16.

6. Public Comment

Mr. Mawhinney said he believes the Governor's Water Listening Session went as well as it did partly due to the efforts of local entities working cooperatively and encouraged such efforts in the future.

He also encouraged the GUAC to write a letter to Governor's office as a follow-up to the session. Doing this will keep the issues at the forefront. Mr. Seasholes agreed to circulate a draft to the members for comment and/or approval.

7. Date and Agenda for Next Meeting

The next meeting date was tentatively set for March 16, 2005 at 9:00 a.m. As part of the agenda, Gregg Houtz, with ADWR's legal division, will be invited to talk about the recently passed Arizona Water Settlement Act.

8. Adjournment

The meeting was adjourned at 10:35 a.m.